REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

By this Amendment, Claims 1 and 14 are amended, and Claim 28 is added. Thus, Claims 1-4 and 6-28 are pending in this application. Claims 1, 14 and 28 are independent. Support for the amendments to independent Claims 1 and 14 can be found, for example, in the lone figure and on page 3, lines 21-29 of the specification. Support for new independent Claim 28 can be found, for example, in Claim 1 and on page 4, lines 37-39 of the specification. No new matter is added.

Independent Claim 1 stands rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,021,259 to Singelyn, or alternatively under 35 U.S.C. §103(a) over Singelyn; and independent Claim 14 stands rejected under 35 U.S.C. §103(a) over Singelyn in view of U.S. Patent No. 5,211,990 to McKinney et al. ("McKinney").

Independent Claim 1 recites a method of providing a substrate with a coating layer of a polymeric material. The method comprises a) suspending a pulverous, polymeric material in a fluid, the polymeric material possessing a softening temperature and a melting temperature, b) pressurizing the fluid to produce a pressurized suspension, c) ejecting the pressurized suspension onto the substrate to form the coating layer, and d) heating the polymeric material, during any one of the steps a)-c), to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material. The pulverous, polymeric material is suspended in the fluid before pressurizing the fluid and before ejecting the pressurized suspension.

Independent Claim 14 is directed to a device for providing a substrate with a coating layer of a polymeric material. The device comprises mixing equipment,

arranged to suspend a pulverous polymeric material in a fluid; pressurizing equipment, arranged to pressurize said fluid; at least one nozzle operatively connected to the pressurizing equipment and arranged to eject the suspension of polymeric material in fluid towards the substrate; and heating equipment arranged to heat the polymeric material to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material. The mixing equipment is arranged to suspend the pulverous polymeric material in the fluid before the pressurizing equipment pressurizes the fluid and before the at least one nozzle ejects the pressurized suspension.

Singelyn discloses a method for applying a thermoplastic polymer coating to a surface to create a semi-fused, highly porous coating (see col. 2, lines 22-27 of Singelyn). The method involves spraying fluoroelastomer powder through the flame of a thermal spray gun onto a tie coat 10 prepared on a metal substrate 12 (see Fig. 1 and col. 3, lines 18 and 19). The Advisory Action states that Singelyn contemplates suspending the fluoroelastomer powder in a fluid as recited in independent Claims 1 and 14. In particular, the Advisory Action references the discussion in lines 44-52 of column 3 of Singelyn to show that Singelyn discloses suspending the fluoroelastomer powder in nitrogen as the particles are sprayed through a nitrogen/hydrogen-fed flame of the thermal spray gun.

However, as discussed in column 3, lines 39-44 of the reference, Singelyn uses the nitrogen disclosed here to dilute the hydrogen fuel which acts a fuel source for the thermal spray gun. Although the fluoroelastomer powder may be included in the mixed gas stream of the thermal spray, the fluoroelastomer powder is not suspended before the fluoroelastomer particles are pressurized (the Official Action believes that *pressurizing* Singelyn's fluoroelastomer particles in fluid would have

been obvious) and ejected by the thermal spray gun. That is, though Singelyn's fluoroelastomer particles are sprayed through the flame of the thermal spray gun onto the tie coat, the nitrogen is not actually used as a fluid in which the fluoroelastomer particles are suspended before the fluoroelastomer particles are pressurized and ejected by the thermal spray gun. Thus, Singelyn fails to disclose that a pulverous polymeric material is suspended in a fluid before pressurizing the fluid and before ejecting the pressurized suspension as recited in independent Claims 1 and 14. McKinney fails to overcome the deficiencies of Singelyn. Therefore, Singelyn and McKinney, either alone or in combination, fails to disclose, and would not have rendered obvious, the combination of features recited in independent Claims 1 and 14. Therefore, independent Claims 1 and 14 are patentable over Singelyn and McKinney for at least the reasons discussed above.

Claims 2-4, 6-13 and 15-27 are patentable over the applied references at least by virtue of their respective dependence from patentable independent Claims 1 and 14, as well as for the additional subject matter these claims recite.

For example, Claim 27 recites that the fluid is pressurized to a pressure of about 100 bar. The Official Action acknowledges that Singelyn and McKinney fail to disclose that a fluid is pressurized to the claimed pressure, but takes the position that this pressure would have been obvious as a result of mere optimization (see page 4, lines 15 and 16 of the Official Action). However, Singelyn desires to create a semi-fused, highly porous coating (see col. 2, lines 22-27 of Singelyn). To achieve the highly porous coating, the flame temperature heating the thermoplastic particles *prevents melting and coalescing* of the thermoplastic particles (see col. 3, lines 26-30 and 34-39). That is, Singelyn seeks to prevent particles from coalescing on contact with the substrate (see col. 3, lines 34-36 of Singelyn). Modifying Singelyn's

method to include the claimed pressure would make Singelyn's particles impact the substrate with such force that they coalesce on contact with the substrate. Therefore, Claim 27 is patentable over the applied references for at least this reason, as well as by virtue of its dependency from patentable independent Claim 1.

Independent Claim 28 is presented for consideration. Independent Claim 28 is similar to Claim 1 and additionally defines that the substrate comprises a fiber based layer. The coating in Singelyn's method is not applied to a substrate comprising a fiber based layer. The fluoroelastomer coated metal surface in Singelyn is heated in an oven at temperatures ranging from 750° F to 800° F (see col. 4, lines 22-51). Such temperatures would destroy a fiber based layer. Accordingly, independent Claim 28 is patentable for at least these reasons.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date August 3, 2009

By: _____

Matthew L. Schneider
Registration No. 32814

David R. Kemeny
Registration No. 57241

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620